DOCUMENT RESUME

ED 378 047 SE 055 609

TITLE	From the Ground Up: Modeling, Measuring, and Constructing Houses. Seeing and Thinking Mathematically in the Middle Grades.
INSTITUTION	Education Development Center, Inc., Newton, Mass.
SPONS AGENCY	National Science Foundation, Washington, D.C.
REPORT NO	ISBN-0-435-08360-0
PUB DATE	94
CONTRACT	NSF-9054677
NOTE	206p.
AVAILABLE FROM	Heinemann, 361 Hanover Street, Portsmouth, NH 03801-3912 ($32.50).
PUB TYPE	Books (010) -- Guides - Classroom Use - Teaching Guides (For Teacher) (052)
EDRS PRICE	Document Not Available from EDRS.
DESCRIPTORS	Activity Units; *Architecture; *Building Design; *Geometry; Grade 6; Grade 7; Grade 8; Intermediate Grades; Junior High Schools; Lesson Plans; *Mathematical Applications; Mathematics Curriculum; *Mathematics Instruction; *Measurement; Middle Schools; Units of Study; Worksheets
IDENTIFIERS	*Mathematics Activities

ABSTRACT

In this unit, part of the Seeing and Thinking Mathematically in the Middle Grades series, students use mathematics to design and construct a model home from the ground up. Through the process of designing floor plans, constructing walls and roofs, and making cost estimates, students explore key concepts in geometry and measurement and engage in problem solving, communication, reasoning, and making connections. The book contains four sections. Section 1, "Floor Plans, Site Plans, and Walls," emphasizes scale and proportion and area measurement. Section 2, "Roofs and Nets," emphasizes geometric representations. In Section 3, "Area and Cost," students estimate the cost of materials and labor required to build their house. In Section 4, "Final Assessment Project: An Ideal Home," students complete a final project which also serves as the major learning assessment for the unit. Appendices include reproducible blackline masters in both English and Spanish, including a letter to students' families and sample student projects. A unit overview discusses mathematical themes and processes, shorter routes through the unit, preparing for and teaching the lessons, necessary materials, classroom setup, and student assessment. Contains 10 references. (MKR)

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